



N THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Number: 6,117,176 Issued: Sep. 12, 2000

Name of Patentee: Applied Elastomerics, Inc.

For: ELASTIC-CRYSTAL GEL

Commissioner of Patents and Trademarks Washington, D.C. 20231

ATTN: Decision and Certificate of Correction

Branch of the Patent Issue Division

OF NOV 2 PORTE SOOD SOOD SOOD

SUBSTITUTION CORRECTION SHEETS TO PREVIOUS SUBMITTED SHEETS OF REQUEST FOR CERTIFICATE OF CORRECTION OF PATENT

FOR PINO MISTAKE (37 CFR 1.322(A))

On September 18, 2000 Patentee submitted two sets of 10 sheets for correction in the above identified patent. Of the ten sheets, two sheets contained transcription errors on sheet 6 of 10 and on sheet 7 of 10. The transcription errors are: "(once amended)" and "(twice amended)" appearing in the deletion instructions of claims 4 and 7 respectively.

Attached in duplicate are two substitution correction sheet 6 of 10 and sheet 7 of 10 of Forms of PTO-1050 with at least one copy being suitable for printing. Please insert the corrected sheets and remove the error sheets.

Please send the Certificate to: Applied Elastomerics, Inc., 163 West Harris Avenue, South San

Francisco, CA 94080.

Agent for Patentee

Reg. No. 29,782

650 827-1388 Fax: 1389

Applied Elastomerics, Inc. 163 West Harris Avenue South San francisco, CA 94080

October 14, 2000

PATENT NO. : 6,117,176

DATED

Sep. 12, 2000

INVENTOR(S): John Y. Chen

Correction sheet 1 of 10

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

At column 1, correct line 14 after year 1994 by deleting:

At column 1, correct line 14, after the number 286 by adding

At column 1, correct lines 21-25 by deleting the following:

"which in turn is a CIP of 957,290); now U.S. Pat. No. 5,334,646 Ser. No. 08/152,743, filed Nov. 15, 1993 now U. S. Pat. No. 5,629.294 (CIPs of 114.688; 935,540; 876,118; 705,096; 957,290; 705,711" \(\)

and adding the sentence:

-- The above patents and applications are specifically incorporated herein by reference. --.

At column 3, correct line 23, after the word articles before the period by adding the following:

-- as shown generally by the relationship of G_n and M_n and more specific article examples of M_1 , M_2 , M_3 , and M_4 with G_n when the material M_n is n = 1(fabric/cloth), n = 2 (foam/sponge), n = 3 (synthetic resin/plastic), and n = 4 (fibre) a s shown in Figs 3d, 3e, 3h, and 3j respectively

At column 3, correct line 25, after the word articles before the period by adding the following:

-- as shown generally by the relationship of G_n and M_n and more specific article examples of M_1 , M_2 , M_3 , and M_4 with G_n when the material M_n is n = 1(fabric/cloth), n = 2 (foam/sponge), n = 3 (synthetic resin/plastic), and n = 4 (fibre) a s shown in Figs 4l, 4m, 4n, and 4q respectively --.

MAILING ADDRESS OF SENDER:

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PATENT NO.

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Certificate of Correction (PTO Form 1050)—Amended

OK

PATENT NO. : 6,117,176

DATED

Sep. 12, 2000

INVENTOR(S): John Y. Chen

Correction sheet 2 of 10

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

At column 3, correct line 26 by deleting the polymer notation: "S-E-EB-S" and adding instead the correct notation: S-E-EP-S	6K
At column 6, correct line 59 by deleting the word: "poly(butadine)" and adding instead the correct word: poly(butadiene)	orc

-At column 9, correct line 8 by deleting the word: "polybutadine" and adding instead the correct word: -- polybutadiene --.

At column 9, correct line 54 by deleting the word "negligable" and adding instead the correct word: ---negligible---.

At column 9, correct line 67 by deleting the word: "detactable" and adding instead the correct word: ---detectable---.

At column 10, correct line 47 by deleting the word "resutls" and adding instead the correct word: ---results---.

Accolumn 12, correct line 15 by deleting: "glass a transition" and adding -- a glass transition --.

At column 13, correct line 9 by deleting the word "amorpous" and adding the correct word: ---amorphous--

At column 15, correct line 44 by deleting the word "steraric" and adding the correct word:

6,117,176 PATENT NO.

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Certificate of Correction (PTO Form 1050)—Amended

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PATENT NO. : 6,117,176

DATED

Sep. 12, 2000

INVENTOR(S): John Y. Chen

Correction sheet 3 of 10

It is certified that error appears in the above—identified patent and that said Letters Patent is hereby corrected as shown below:

At column 23 correct claim 1 at lines 2-20 by deleting:

Scan as image

"1. An improved gelatinous composition comprising: a crystal gel formed from (I) 100 parts by weight of one or more linear, branched, star-shaped (radial), or multiarm block copolymers or mixtures of two or more such block copolymers, said block copolymers having one or more midblocks, said midblocks comprising one or more substantially crystalline polyethylene midblocks and with one or more amorphous midblocks; optionally in combination with a selected amount of one or more of (II) a polymer or copolymer, and selected amounts of a plasticizing oil (III) sufficient to achieve gel rigidities of from less than about 2 gram Bloom to about 1,800 gram Bloom with the proviso that said block copolymers without any amorphous midblocks are combined with at least one block copolymer having at least one amorphous midblock, wherein said block midblocks of copolymers forming said crystal gel having a selected amount of crystallinity sufficient to exhibit a melting endotherm of at least about 40°C as determined by DSC curve."

and adding the corrected claim 1 as follows:

1. An improved gelatinous composition comprising: a crystal gel formed from (I) 100 parts by weight of one or more linear, branched, star-shaped (radial), or multiarm block copolymers or mixtures of two or more such block copolymers, said block copolymers having one or more midblocks, said midblocks comprising one or more substantially crystalline polyethylene midblocks and with (I) one or more amorphous midblocks or (ii) without amorphous midblocks, in combination with or without a selected amount of one or more of (II) a polymer or copolymer, and selected amounts of (III) a plasticizing oil sufficient to achieve gel rigidities of from less than about 2 gram Bloom to about 1,800 gram Bloom, with the proviso when said (I) block copolymers without any amorphous midblocks are combined with at least one block copolymer having at least one amorphous midblock, that said midblocks of said (I) block copolymers forming said crystal gel comprises a selected amount of crystallinity sufficient to exhibit a melting endotherm of at least about 40°C as determined by DSC curve. --

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Sep. 12, 2000

INVENTOR(S): John Y. Chen

Correction sheet 4 of 10

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

At column 23 correct claim 2 at lines 21-45 by deleting:

"2. An improved gelatinous composition comprising: a crystal gel formed from 100 parts by weight of one or more block copolymers or mixtures of two or more such block copolymers, said block copolymers having the formula poly(styrene-ethyleneethylene-butylene-styrene), poly(styrene-ethyleneb₄₅-ethylene-propylene-styrene), poly(styrene-ethylene-butylene₂₅-styrene), poly(styrene-ethylene-ethylenepropylene-ethylene-styrene), poly(styrene-ethylene-propylene-ethylene-styrene), poly(styrene-ethylene-propylene-ethylene-ethylene-propylene-styrene),poly(styreneethylene-ethylene-butylene)_n, poly(styrene-ethyleneb₄₅-ethylene-propylene)_n, poly(styrene-ethylene-butylene₂₅)_n, poly(styrene-ethylene-ethylenepropylene-ethylene)_n, poly(styrene-ethylene-propylene-ethylene)_n, poly(styreneethylene-propylene-ethylene-ethylene)_n, midblocks comprising one or more substantially crystalline polyethylene midblock segment, wherein subscript n is two or more; in combination with or without a selected amount of one or more of a (II) polymer or copolymer, and selected amounts of a plasticizing oil (III) sufficient to achieve gel rigidities of from less than about 2 gram Bloom to about 1,800 gram Bloom, wherein said gel is capable of exhibiting greater tear resistance or greater fatigue resistance than a gel having a corresponding rigidity made from a substantially amorphous poly(styrene-ethylene-butylene-styrene) or poly(styrene-ethylenepropylene-styrene) block copolymers having substantially non-crystalline polyethylene midblock segments."

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PATENT NO. : 6,117,176

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Sep. 12, 2000

INVENTOR(S): John Y. Chen

Correction sheet 5 of 10

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

At column 23, add the corrected claim 2 as follows:

2. An improved gelatinous composition comprising: a crystal gel formed from (I) 100 parts by weight of one or more of the same block copolymers or mixtures of two or more of a different block copolymers, said block copolymers having the formula poly(styrene-ethylene-butylene-styrene), poly(styrene-ethylene-ethylene-ethylenepropylene-styrene), poly(styrene-ethylene-butylene₂₅-styrene), poly(styreneethylene-ethylene-propylene-ethylene-styrene), poly(styrene-ethylene-propylene-ethylenestyrene), poly(styrene-ethylene-propylene-ethylene-ethylene-propylene-styrene), poly(styrene-ethylene-butylene)_n, poly(styrene-ethylene-ethylene-propylene)_n, poly(styrene-ethylene-butylene₂₅)_n, poly(styrene-ethylene-propyleneethylene)_n, poly(styrene-ethylene-propylene-ethylene)n, poly(styrene-ethylene-propyleneethylene-ethylene-propylene)_n, midblocks comprising one or more substantially crystalline polyethylene midblock segment(s), wherein subscript n is two or more; wherein said (I) block copolymers in combination with or without a selected amount of one or more of (II) a polymer or copolymer, and selected amounts of (III) a plasticizing oil sufficient to achieve a gel rigidity of from less than about 2 gram Bloom to about 1,800 gram Bloom, wherein said gel is capable of exhibiting greater tear resistance or greater fatigue resistance than a gel having a corresponding rigidity made from a substantially amorphous poly(styreneethylene-butylene-styrene) or poly(styrene-ethylene-propylene-styrene) block copolymers having substantially non-crystalline polyethylene midblock segments. --

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Sep. 12, 2000

INVENTOR(S): John Y. Chen

Correction sheet 6 of 10

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

At column 23, correct claim 4 at lines 50-59 by deleting:

"4. (Once amended) A gel according to claim 1 or 2, wherein said gel exhibits in differential scanning calorimeter (DCS) a melting endotherm of about 28°C, 29°C, 30oC, 31oC, 32oC, 33oC, 34oC, 35oC, 36oC, 37oC, 38oC, 39oC, 40oC, 41oC, 42°C, 43°C, 44°C, 45°C, 46°C, 47°C, 48°C, 49°C, 50°C, 51°C, 52°C, 53°C, 54°C, 55°C, 56°C, 57°C, 58°C, 59°C, 60°C, 61°C, 62°C, 63°C, 64°C, 65°C, 66°C, 67°C, 68°C, 69°C, 70°C, 71°C, 72°C, 73°C, 74°C, 75°C, 76°C, 77°C; 78°C, 79°C, 80°C, 90°C, 100°C, 110°C, or 120°C."

At column 23, add the corrected claim 4 as follows:

2- 4. A gel according to claim 1 or 2, wherein said gel exhibits in differential scanning calorimeter (DSC) a melting endotherm of about 25°C, 28°C, 29°C, 30°C, 31°C, 32°C, 33°C, 34°C, 35°C, 36°C, 37°C, 38°C, 39°C, 40°C, 41°C, 42°C, 43°C, 44°C, 45°C, 46°C, 47°C, 48°C, 49°C, 50°C, 51°C, 52°C, 53°C, 54°C, 55°C, 56°C, 57°C, 58°C, 59°C, 60°C, 61°C, 62°C, 63°C, 64°C, 65°C, 66°C, 67°C, 68°C, 69°C, 70°C, 71°C, 72°C, 73°C, 74°C, 75°C, 76°C, 77°C, 78°C, 79°C, 80°C, 90°C, 100°C, 110°C, or 120°C. --

At column 24, correct claim 6 at lines 14-25 by deleting:

"6. A gel according to claim 1 or 2, wherein said gel is being denoted by G, is physically interlocked with a selected material M forming a composite of the combination G_nM_n , $G_nM_nG_n$, $M_nG_nM_n$, $M_nG_nG_nM_n$, $G_nM_nM_nG_n$, $G_nM_nG_nM_nG_n$, $M_nM_nM_nG_n$, $M_nM_nM_nG_nM_nM_n$ or a permutation of one or more of said G_n with M_n; wherein when n is a subscript of M, n is the same or different selected from the group consisting of paper, foam, plastic, fabric, metal, metal foil, concrete, wood, glass, glass fibers, ceramics, synthetic resin, synthetic fibers or refractory materials; and wherein when n is a subscript of G, n denotes the same or a different gel rigidity."

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DATED

Sep. 12, 2000

INVENTOR(S): John Y. Chen

Correction sheet 7 of 10

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

At column 24, add the corrected claim 6 as follows:

6. A gel according to claim 1 or 2, wherein said gel is being denoted by G, is physically interlocked with a selected material M or in combination with one or more of the same gel or a different gel forming a composite of the combination G_nG_n, $G_nG_nG_n$, G_nM_n , $G_nM_nG_n$, $M_nG_nM_n$, $M_nG_nG_n$, $M_nM_nM_nG_nM_n$, $M_nG_nG_nM_n$, $G_nM_nG_nG_n,\ G_nG_nM_nM_n,\ G_nM_nM_nG_n,\ G_nG_nM_nG_nM_nG_n,\ G_nM_nG_nM_nM_n,$ $M_nG_nM_nG_nM_nG_n$, $G_nG_nM_nM_nG_n$, $G_nG_nM_nG_nM_n$, $G_nG_nM_nG_nM_nG_n$, $G_nM_nG_nM_nG_n$, $M_nM_nM_nG_n$, $M_nM_nM_nG_nM_nM_n$ or a permutation of one or more of said G_n with M_n ; wherein when n is a subscript of M, n is the same or different selected from the group consisting of paper, foam, plastic, fabric, metal, metal foil, concrete, wood, glass, glass fibers, ceramics, synthetic resin, synthetic fibers or refractory materials; and wherein when n is a subscript of G, n denotes the same or a different gel rigidity .--

At column 24, correct claim 7 at lines 26-46 by deleting:

"7. (Twice amended) A gel according to claim 1 or 2 wherein said gel being formed into a gel hand exercising grip, a gel shape floss suitable for use as a dental floss, a gel crutch cushion, a gel cervical pillow, a gel bed wedge pillow, a gel leg rest, a gel neck cushion, a gel mattress, a gel bed pad, a gel elbow pad, a gel dermal pad, a gel wheelchair cushion, a gel helmet liner, a gel cold and hot pack, a gel exercise weight belt, a gel traction pad or belt, a gel cushion for splints, a gel sling, a gel brace for the hand, wrist, finger, forearm, knee, leg, clavicle, shoulder, foot, ankle, neck, back, rib, a gel sole for orthopedic shoe, a gel shaped toy article, a gel optical cladding for cushioning optical fibers from bending stresses, a gel swab tip, a gel fishing bate, a gel seal against pressure, a gel thread, a gel strip, a gel yarn, a gel tape, a weaved gel cloth, a gel fabrics, a gel balloon for valvuloplasty of the mitral valve, a gel trointestinal balloon dilator, a gel esophageal balloon dilator, a gel dilating balloon catheter use in coronary angiogram, a gel condom, a gel toy balloon, a gel surgical and examination glove, a self sealing enclosures for splicing electrical and telephone cables and wires, a gel film, or a gel liner."

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PATENT NO. : 6,117,176

DATED

Sep. 12, 2000

INVENTOR(S): John Y. Chen

Correction sheet 8 of 10

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

At column 24, add the corrected claim 7 as follows:

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7. A gel according to claim 1 or 2, wherein said gel being formed into a gel hand exercising grip, a gel shape floss suitable for use as a dental floss, a gel crutch cushion, a gel cervical pillow, a gel bed wedge pillow, a gel leg rest, a gel neck cushion, a gel mattress, a gel bed pad, a gel elbow pad, a gel dermal pad, a gel wheelchair cushion, a gel helmet liner, a gel cold and hot pack, a gel exercise weight belt, a gel traction pad or belt, a gel cushion for splints, a gel sling, a gel brace for the hand, wrist, finger, forearm, knee, leg, clavicle, shoulder, foot, ankle, neck, back, rib, a gel sole for orthopedic shoe, a gel shaped toy article, a gel optical cladding for cushioning optical fibers from bending stresses, a gel swab tip, a gel fishing bate, a gel seal against pressure, a gel thread, a gel strip, a gel yarn, a gel tape, a weaved gel cloth, a gel fabrics, a gel balloon for valvuloplasty of the mitral valve, a gel trointestinal balloon dilator, a gel esophageal balloon dilator, a gel dilating balloon catheter use in coronary angiogram, a gel condom, a gel toy balloon, a gel surgical and examination glove, a self sealing enclosures for splicing electrical and telephone cables and wires, a gel film, or a gel liner. --

At column 24, correct claim 8 at lines 47-59 by deleting:

"8. A gel according to claim 1 or 2, wherein said gel is being denoted by G, is physically interlocked with a selected material M or in combination with one or more of the same gel or different gel forming a composite of the combination G_nG_n , $G_nG_nG_n$, G_nM_n , $G_nM_nG_n$, $M_nG_nM_n$, $M_nG_nG_n$, $M_nM_nM_nG_nM_n$, $M_nG_nG_nM_n$, $G_nM_nG_nG_n$, $G_nG_nM_nM_n$, $G_nM_nM_nG_n$, $G_nG_nM_nG_nM_nG_nG_n$, $G_nM_nG_nM_nM_n$, $M_nG_nM_nG_nM_nG_n$, $G_nG_nM_nM_nG_n$, $G_nG_nM_nG_nM_n$, $G_nG_nM_nG_nM_nG_n$ or a permutation of one or more of said G_n with M_n; wherein when n is a subscript of M, n is the same or different selected from the group consisting of paper, foam, plastic, fabric, metal, metal foil, concrete, wood, glass, glass fibers, ceramics, synthetic resin, synthetic fibers or refractory materials; and wherein when n is a subscript of G, n denotes the same or a different gel rigidity."

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DATED

Sep. 12, 2000

INVENTOR(S): John Y. Chen

Correction sheet 9 of 10

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

At column 24, add the corrected claim 8 as follows:

A gel according to claim 5, wherein said composite being formed into a gel hand exercising grip, a gel shape floss suitable for use as a dental floss, a gel crutch cushion, a gel cervical pillow, a gel bed wedge pillow, a gel leg rest, a gel neck cushion, a gel mattress, a gel bed pad, a gel elbow pad, a gel dermal pad, a gel wheelchair cushion, a gel helmet liner, a gel cold and hot pack, a gel exercise weight belt, a gel traction pad or belt, a gel cushion for splints, a gel sling, a gel brace for the hand, wrist, finger, forearm, knee, leg, clavicle, shoulder, foot, ankle, neck, back, rib, a gel sole for orthopedic shoe, a gel shaped toy article, a gel optical cladding for cushioning optical fibers from bending stresses, a gel swab tip, a gel fishing bate, a gel seal against pressure, a gel thread, a gel strip, a gel yarn, a gel tape, a weaved gel cloth, a gel fabrics, a gel balloon for valvuloplasty of the mitral valve, a gel trointestinal balloon dilator, a gel esophageal balloon dilator, a gel dilating balloon catheter use in coronary angiogram, a gel condom, a gel toy balloon, a gel surgical and examination glove, a self sealing enclosures for splicing electrical and telephone cables and wires, a gel film, or a gel liner. --

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At column 24, correct claim 9 at lines 60-65 by deleting:

"9. A composite of claim 6 shaped in the form of a gel liner for lower limb or above the knee amputee prosthesis formed by injection molding, extruding, spinning, casting, or dipping of said gel in combination with M selected from foam, plastic, fabric, metal, ceramics, synthetic resin, synthetic fibers or refactory materials."

At column 24, add the corrected claim 9 as follows:

9. A composite of claim 6 shaped in the form of a gel liner for lower limb or above the knee amputee prosthesis formed by injection molding, extruding, spinning, casting, or dipping of said gel, wherein said gel comprises at least one said block copolymer of poly(styrene-ethylene-ethylene-propylene-styrene), poly(styreneethylene-ethylene-propylene)_n, poly(styrene-ethylene-butylene-styrene), or poly(styrene-ethylene-ethylene-butylene)_n or a mixture of two or more of said block copolymers. --

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Sep. 12, 2000

INVENTOR(S): John Y. Chen

Correction sheet 10 of 10

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

At columns 24, 25, & 26, correct claim 10 at lines 66-67, 1-4, & 1-2 respectively by deleting:



"10. A composite of claim 8 shaped in the form of a gel liner for lower limb or above the knee amputee prosthesis formed by injection molding, extruding, spinning, casting, or dipping of said gel in combination with or without M selected from foam, plastic, fabric, metal, ceramics, synthetic resin, synthetic fibers or refactory materials and in combination with or without one or more gels having a different rigidity."

At column 24, add the corrected claim 10 as follows:



10. A gel of claim 4 shaped in the form of a gel liner for lower limb or above the knee amputee prosthesis formed by injection molding, extruding, spinning, casting, or dipping of said gel, wherein said gel comprises at least one said block copolymer of poly(styrene-ethylene-ethylene-propylene-styrene), poly(styrene-ethylene-et propylene)_n, poly(styrene-ethylene-ethylene-butylene-styrene), or poly(styrene-ethylene-butylene)_n, or a mixture of two or more of said block copolymers: --

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